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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/779,414

02/13/2004

Sanjay Kaniyar

13768.490

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7590

05/01/2008

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EXAMINER

DOAN, TRANG T

ART UNIT

PAPER NUMBER

2131

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/779,414	<b>Applicant(s)</b> KANIYAR ET AL.	
	<b>Examiner</b> TRANG DOAN	<b>Art Unit</b> 2131	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>02/13/2004 abd 03/29/2005</u> .                               | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. Claims 1-37 are pending for consideration.

#### ***Information Disclosure Statement***

2. The information disclosure statements submitted on 02/13/2004 and on 03/29/2005 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements are being considered by the examiner.

#### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goldberg et al. (US 20040013112) (hereinafter Goldberg) in view of Wilson et al. (US 7159119) (hereinafter Wilson).

Regarding claim 1, Roberts discloses in a local server that receives data from one or more remote entities over a data transport protocol, a method of applying a cryptographically secure hash to packets from unverified remote entities for preventing denial of service attacks on lookup tables used to store state information for one or more remote entities, while maintaining the performance of the local server for packets from verified remote entities, the method comprising the acts of: receiving a packet of

data from a remote entity that includes connection identifier information (Goldberg: paragraphs 0014 and 0055: hashing a portion of the received packet); hashing at least a portion of the connection identifier information using a first hash function for determining if state information exists for the remote entity in a table of verified remote entities (Goldberg: paragraphs 0061-0062, 0066-0067 and 0071); if the state information for the remote entity does not exist in the table of verified remote entities, hashing at least a portion of the connection identifier information using a second hash function that is cryptographically secure for determining if state information exists for the remote entity in a table of unverified remote entities (Goldberg: paragraph 0014); if the state information for the remote entity exists in the table of unverified remote entities, comparing secret information provided within the packet of data with information previously supplied to the remote entity for determining if the remote entity can be verified such that state information can be moved to the table of verified remote entities (Goldberg: paragraphs 0014 and 0062); if state information for the remote entity does not exist in the table of unverified remote entities (Goldberg: paragraphs 0072-0073 and 0082-0084); checking whether the local server is a listener that may accept the packet of data from the remote entity for determining if state information for the remote entity should be created in the table of unverified remote entities (Goldberg: paragraphs 0071-0072).

Goldberg does not explicitly disclose two lookup tables (i.e., the table of verified remote entities and the table of unverified remote entities). However, Wilson discloses two lookup tables (Wilson: See Abstract section and column 4 lines 50-54). Therefore,

it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Goldberg by specifically providing the features, as taught by Wilson, because it is well known in the art at the time of the invention for the purpose of retrieving information from a secured data store that securely pre-processes provided access information and provides efficient retrieval of address information (Wilson: column 2 lines 20-24).

Regarding claims 2 and 13, Goldberg as modified discloses wherein if the state information for the remote entity does exist in the table of verified remote entities, standard data transport protocol processing is performed (Goldberg: paragraphs 0002, 0009 and 0048).

Regarding claims 3 and 14, Goldberg as modified discloses wherein the standard data transport protocol is transmission control protocol (Goldberg: paragraphs 0002, 0009 and 0048).

Regarding claims 4, 15, 23 and 30, Goldberg as modified discloses wherein if the state information for the remote entity exists in the table of unverified remote entities, but the remote entity cannot be verified, the method further comprises the act of: checking if the packet includes a synchronization message for determining how to respond to the unverified remote entity (Goldberg: See figure 9).

Regarding claims 5, 16, 24 and 31, Goldberg as modified discloses wherein if the packet of data includes a synchronization message, the local server responds by either sending a synchronization-acknowledgement packet or by deleting the packet (Goldberg: See figure 9).

Regarding claims 6, 17, 25 and 32, Goldberg as modified discloses wherein if the packet of data does not include a synchronization message, the local server responds by one or more of the following deleting the packet, retransmitting the original message to the remote entity or removing the state information from the table of unverified remote entities (Goldberg: paragraphs 0015 and 0016).

Regarding claim 7, Goldberg as modified discloses wherein the first hash function is also a cryptographically secured hash function (Goldberg: paragraphs 0014 and 0058).

Regarding claim 8, Goldberg as modified discloses wherein the first and second hash functions are one of hardware based or software based (Goldberg: paragraph 0014).

Regarding claims 9, 20, 27 and 35, Goldberg as modified discloses wherein if state information for the remote entity does not exist in either the table of verified remote entities or the table of unverified remote entities, and wherein the server is a listener that may accept the package of data from the remote entity, the method further comprising the acts of: creating state information for the remote entity within the table of unverified remote entities; and sending a synchronization-acknowledgement packet that includes an initial sequence number to the remote entity (Goldberg: See figure 9 and Wilson: See Abstract section and column 4 lines 50-54). The same motivation was utilized in claim 1 applied equally well to claim 9.

Regarding claims 10, 21, 28 and 36, Goldberg as modified discloses wherein if state information for the remote entity does not exist in either the table of verified

entities or the table of unverified entities, and the server is not a listener that may accept the package of data from the remote entity, the method further comprises the act of: sending a reset command to the remote entity for indicating that the packet was not verifiable and needs to be resent (Goldberg: See figure 9 and paragraph 0124 and Wilson: See Abstract section and column 4 lines 50-54). The same motivation was utilized in claim 1 applied equally well to claim 10.

Regarding claims 11 and 37, Goldberg as modified discloses wherein the remote entity becomes verified by sharing a secret sent to the remote entity by the local server (Goldberg: paragraphs 0056-0057 and 0066-0067).

Regarding claim 12, this claim has limitations that is similar to those of claim 1, thus it is rejected with the same rationale applied against claim 1 above.

Regarding claim 18, this claim has limitations that is similar to those of claim 1, thus it is rejected with the same rationale applied against claim 1 above.

Regarding claim 19, this claim has limitations that is similar to those of claims 7 and 8, thus it is rejected with the same rationale applied against claims 7 and 8 above.

Regarding claim 22, this claim has limitations that is similar to those of claim 1, thus it is rejected with the same rationale applied against claim 1 above.

Regarding claim 26, this claim has limitations that is similar to those of claim 19, thus it is rejected with the same rationale applied against claim 19 above.

Regarding claim 29, this claim has limitations that is similar to those of claim 1, thus it is rejected with the same rationale applied against claim 1 above.

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Regarding claim 33, this claim has limitations that is similar to those of claim 18, thus it is rejected with the same rationale applied against claim 18 above.

Regarding claim 34, this claim has limitations that is similar to those of claim 19, thus it is rejected with the same rationale applied against claim 19 above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TRANG DOAN whose telephone number is (571)272-0740. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (571) 272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Trang Doan/  
Examiner, Art Unit 2131

/Ayaz R. Sheikh/

Supervisory Patent Examiner, Art Unit 2131

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